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Test 449: Choremaster B

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The Experiment Station
University of Nebraska, College of Agriculture
W. V. Lambert, Director, Lincoln, Nebraska

Department of Agricultural Engineering
Dates of test: Sept. 11 to Sept. 20, 1950.
Manufacturer: THE LODGE & SHIPLEY CO.,
CINCINNATI, OHIO
Manufacturer's rating: Not rated.

NEBRASKA TRACTOR TEST NO. 449

CHOREMASTER "B"

BELT HORSEPOWER TESTS

* Hp	Crank shaft speed rpm	Fuel Consumption			Water used gal per hour	Temp Deg F		Barometer in Hg
		Gal per hour	Hp-hr per gal	Lb per hp-hour		Cooling med	Air	
TESTS B AND C—100% MAXIMUM LOAD—TWO HOURS								
1.47	3601	0.259	5.68	1.082	Air cooled		74	28.973
TEST D—RATED LOAD—ONE HOUR								
1.31	3599	0.202	6.49	0.947	Air cooled		75	28.950
TEST E—VARYING LOAD—TWO HOURS (20 minute runs; last line average)								
1.32	3602	0.244	5.41	1.136	Air cooled		75	
0.10	3717	0.156	0.64	9.600	" "		77	
0.67	3607	0.200	3.35	1.836	" "		75	
1.47	3439	0.254	5.79	1.061	" "		75	
0.33	3631	0.166	1.99	3.091	" "		75	
0.98	3586	0.220	4.45	1.378	" "		74	
0.81	3597	0.207	3.91	1.568	" "		75	28.950

DRAWBAR HORSEPOWER TESTS

Hp	Draw bar pull lb	Speed miles per hr	Crank shaft speed rpm	Slip of drive wheels %	Fuel Consumption			Water used gal per hour	Temp Deg F		Barometer in Hg
					Gal per hour	Hp-hr per gal	Lb per hp-hr		Cool- ing med	Air	
TESTS F AND G—100% MAXIMUM LOAD—1st GEAR											
0.77	119	2.43	3600	11.92	Not Recorded			Air cooled	80	28.900	
TEST H—RATED LOAD—TEN HOURS—1st GEAR											
0.62	89	2.61	3606	6.24	0.188	3.30	1.863	Air cooled	78	28.961	
TEST J—OPERATING MAXIMUM LOAD—1st GEAR											
0.62	96	2.41	3598	12.98	Not Recorded			Air cooled	83	28.900	

FUEL, OIL and TIME Gasoline octane No. ASTM 76 Research 82 (rating taken from oil company's typical inspection data); weight per gallon 6.140 lb Oil SAE 20; to motor 0.199 gal; drained from motor 0.109 gal Total time motor was operated 41 hours.

CHASSIS Type single wheel garden tractor Serial No 38926 Hydraulic control system none used Advertised speeds mph $1\frac{3}{4}$ to $2\frac{3}{4}$ obtained by governor control Belt pulley diam $2\frac{3}{4}$ V-belt pulley rpm 3600 Clutch jaw clutch on drive wheel operated by hand and automatic clutch on engine Seat none Brakes none Power take-off none.

ENGINE Make Clinton Model B 700 Type single cylinder vertical Serial No 48730 Crankshaft mounted lengthwise Head L Lubrication splash Bore and Stroke $2\frac{1}{8}$ x $1\frac{1}{8}$ Rated rpm 3600 Compression ratio 5.65 to 1 Displacement 5.89 cu in Port Diameter Valves inlet $13/16$ Exhaust $13/16$ Governor variable speed centrifugal Carburetor Size $\frac{3}{8}$ Ignition System magneto Air Cleaner oil washed wire screen Muffler was used Oil Filter none Cooling medium temperature control air cooled engine.

REPAIRS AND ADJUSTMENTS During Test B a decrease in horsepower occurred. The engine head was removed, fuel deposit removed, and test resumed with improved performance. Gear lube leaked on drive wheel and tire during Test H.

REMARKS All test results were determined from observed data and without allowances, additions or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, H and J were made with an operating setting of the carburetor (selected by the manufacturer) of 100% of maximum belt horsepower.

HORSEPOWER SUMMARY

	Draw- bar	Belt
1. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg)	0.81	1.54
2. Observed maximum horsepower (tests F and B)	0.77	1.47
3. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings)	0.61	1.31

We, the undersigned, certify that this is a true and correct report of official tractor test No. 449.

L. F. Larsen
Engineer in Charge

C. W. Smith
F. D. Yung
L. W. Hurlbut
Board of Tractor
Test Engineers

TIRES, WHEELS and WEIGHT

	Tests F, G, & H	Test J	Test K
Rear wheel Type	Pressed steel	Pressed steel	No smaller tire suggested by manufacturer.
Liquid ballast	None	None	
Added cast iron	42 lb	None	
Rear tire No. and size	One 4.50-6	One 4.50-6	
Ply	2	2	
Air pressure	12 lb	12 lb	
Height of drawbar	9 inches	9 inches	
Total weight as tested	165 lb	123 lb	

